Collaborative Programs, Centers, and Institutes

Collaborative Programs

Commonwealth Graduate Engineering Program (CGEP)
Linda Vahala, Director

The Commonwealth Graduate Engineering Program (CGEP) is a unique cooperative agreement. This agreement is among the five largest engineering schools in the Commonwealth of Virginia: Old Dominion University, George Mason University, the University of Virginia, Virginia Commonwealth University and Virginia Polytechnic Institute and State University. The program developed in response to the diverse continuing education needs of engineering graduates working in industry and government.

Graduate engineering courses leading to a Master of Science or Master of Engineering degree or nanotechnology certificate are offered through these universities via a statewide interactive distance-learning network.

Students seeking admission to the various degree programs should request and process their applications through the Commonwealth Graduate Engineering Program Office in the Batten College of Engineering and Technology at Old Dominion University: www.eng.odu.edu/cgep.

Applied Research Center (ARC)
Hani Elsayed-Ali, Director

ARC is an advanced materials engineering and laser technology research center. Staffed with industry/university teams utilizing the Jefferson Lab technologies, ARC provides commercial product-related research in the areas of thin film technology, laser and plasma processing of materials, materials analysis, and devices and sensor fabrication. For more information: www.eng.odu.edu/arc.

National Center for System of Systems Engineering (NCSOSE)
Charles Keating, Director

NCSOSE is a collection of independent, nonprofit, engineering research and application organizations, government entities, and universities that have joined together with a common goal to solve problems, develop technologies, and direct research focused on critical issues related to the integration of complex systems of systems.

Affiliated Centers

Frank Reidy Research Center for Bioelectrics
Richard Heller, Director

The mission of the Center is to increase scientific knowledge and understanding of the interaction of electromagnetic fields and ionized gases with biological cells and to apply this knowledge to the development of medical diagnostics, therapeutics, and environmental contamination. The objectives of the Center are to perform leading edge interdisciplinary and multi-institutional research, recruit top faculty and exceptional graduate students, support regional, national, and international programs, and increase external funding and institutional visibility. For more information: www.odu.edu/eng/bioelectrics/.

Virginia Modeling, Analysis, and Simulation Center (VMASC)
John Sokolowski, Director

VMASC is a multi-disciplinary research center of Old Dominion University. Working with more than one hundred industry, government, and academic members, VMASC furthers the development and applications of modeling simulation, and visualization as enterprise decision-making tools to promote economic, business, and academic development. For more information: www.vmasc.odu.edu.

Departmental Institutes

Coastal Engineering is part of the college’s Department of Civil and Environmental Engineering. Its mission is to foster interdisciplinary educational and research opportunities for faculty and students interested in applied coastal science and engineering. Director: Gangfeng Ma.

Naval Systems and Marine Engineering Institute in collaboration with the shipbuilding and repair industry, promotes the research, development, education, and application of innovative techniques in the lifecycle cost of ownership and productive value of marine assets including military, commercial, and pleasure craft. Director: Jennifer Michaeli.

Plasma Engineering and Medicine Institute focuses on conducting fundamental and applied investigations using Laser and Plasma Technologies. It offers state-of-the-art equipment and a vibrant academic environment where faculty, graduate and undergraduate students engage together in advanced research encompassing fundamental and applied research aspects in the field of cold plasmas, and its applications in engineering and medicine. Director: Mounir Laroussi.

Sustainable Development Institute promotes and provides engineering, ecological, environmental, and economic assistance to local, regional, and national governmental agencies, as well as international organizations and businesses. The institute actively participates in community service by conducting waste minimization and pollution prevention assistance to local businesses. Director: Mujde Erten-Unal.

Transportation Research Institute collaborates with centers and departments across the ODU campus to conduct innovation-based research in the core areas of transportation operations, transportation safety, transportation planning, freight transportation, and environment, energy, and sustainable transport. Director: Mecit Cetin.

Virginia Institute for Photovoltaics research span from the Nanoscale (Fundamental Sciences and Engineering) through the Devices and balance of systems, to the deployment of Gigascale commercial power generation. The current focus is to research and develop the Science and Engineering of Photovoltaic Devices (or Solar cells) and bring them from the laboratory to the industry. Director: Sylvain Marsillac.

Virginia Institute for Vision Analysis aims to leverage complimentary expertise of faculty in computer vision, signal/image processing and machine learning to become one of the leading institute in the field. Research focuses on novel theory, state-of-the-art algorithms, architectures, real-time implementations for biomedical engineering, human- and machine-centric recognition, environmental, and geoscience applications and computer-aided medical diagnosis systems. Director: Khan Iftekharuddin.